

(12) INTERNATIONAL APPLICATION PUBLISHED UNDER THE PATENT COOPERATION TREATY (PCT)

**(19) World Intellectual Property Organization
International Bureau**



**(43) International Publication Date
26 May 2005 (26.05.2005)**

PCT

(10) International Publication Number
WO 2005/047690 A1

(51) International Patent Classification⁷:

F02M 65/00

(74) Agent: CROUCH, David, John; Bromhead Johnson, Kingsbourne House, 229-231 High Holbourn, London WC1V 7DP (GB).

(21) International Application Number:

PCT/GB2004/004568

(22) International Filing Date: 28 October 2004 (28.10.2004)

(25) Filing Language: English

(26) Publication Language: English

(30) Priority Data: 0325184.0 28 October 2003 (28.10.2003) GB

(71) Applicant (*for all designated States except US*): DT ASSEMBLY & TEST - EUROPE LIMITED [GB/GB]; 7th Floor, Beaufort House, 15 St Botolph Street, London EC3A 7NJ (GB).

(72) Inventors; and

(75) Inventors/Applicants (*for US only*): POLLARD, Anthony, Phillip [GB/GB]; 5 Birkdale Close, Bletchley, Milton Keynes MK3 7RF (GB). MURRAY, Andrew, Eric [GB/GB]; 15 Capel Close, Akeley, Bucks MK18 5HX (GB).

(81) Designated States (*unless otherwise indicated, for every kind of national protection available*): AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BW, BY, BZ, CA, CH, CN, CO, CR, CU, CZ, DE, DK, DM, DZ, EC, EE, EG, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, MZ, NA, NI, NO, NZ, OM, PG, PH, PL, PT, RO, RU, SC, SD, SE, SG, SK, SL, SY, TJ, TM, TN, TR, TT, TZ, UA, UG, US, UZ, VC, VN, YU, ZA, ZM, ZW.

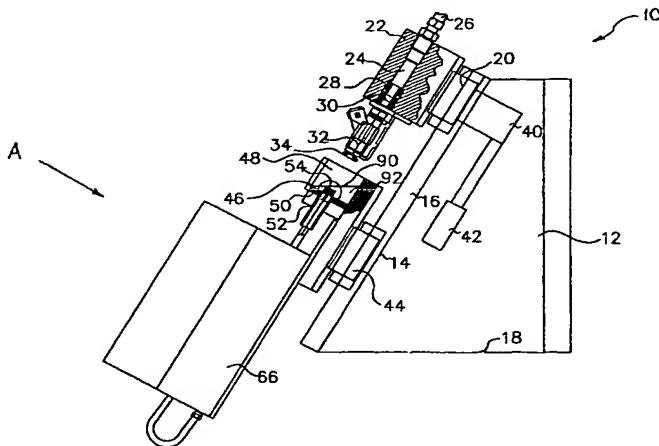
(84) Designated States (*unless otherwise indicated, for every kind of regional protection available*): ARIPO (BW, GH, GM, KE, LS, MW, MZ, NA, SD, SL, SZ, TZ, UG, ZM, ZW), Eurasian (AM, AZ, BY, KG, KZ, MD, RU, TJ, TM), European (AT, BE, BG, CH, CY, CZ, DE, DK, EE, ES, FI, FR, GB, GR, HU, IE, IT, LU, MC, NL, PL, PT, RO, SE, SI, SK, TR), OAPI (BF, BJ, CF, CG, CI, CM, GA, GN, GQ, GW, ML, MR, NE, SN, TD, TG).

Published:

— *with international search report*

[Continued on next page]

(54) Title: AN AUTOMOTIVE FUEL INJECTOR LEAKAGE TESTER



(57) Abstract: An automotive fuel injector leakage tester (10) comprising a mount (22) for such an injector (32) and a flowmeter (66). An injector (32) contains a first liquid when under test to supply such liquid to the injector nozzle (34) so that such liquid can leak therethrough into an interface passageway (58). The interface passageway (58) contains a second liquid which is immiscible with the first liquid, the tester (10) being so constructed that the interface between the first and second liquids remains within the interface passageway (58) whilst the flowmeter (66) provides a measure of the leakage of the first liquid through the nozzle (34) of such an injector (32). The invention extends to a method of testing an automotive fuel injector for leakage, a tester with a heat transfer detection flowmeter (in which the same liquid can flow through the injector as flows through the flowmeter), apparatus and a method of bringing two components together along a slanting imaginary line in a bath of liquid, and a master leak for calibrating an automotive fuel injector tester.

WO 2005/047690 A1



For two-letter codes and other abbreviations, refer to the "Guidance Notes on Codes and Abbreviations" appearing at the beginning of each regular issue of the PCT Gazette.